



K4GSO.us

The Oracle

Newsletter of the Silver Springs Radio Club

Oldest Radio Club in Marion County, FL



August 2021

President's Message

Bill Gillespie, KW5BG

The North Central Florida Outdoor Expo was held this past weekend at the World Equestrian Center. We had a good number of people express interest in ham radio and we were able to show them a number of different aspects of ham radio. We had Wayne's (N4FP) FLEX Maestro connected remotely to his radio at home. Bruce (WA4IPU) was operating FT8 using Elbert's Bud-dipole, Elbert (KQ3K) had a portable station set up, Le-on (K8ZAG) displayed a MERT SHREK Kit, and I was operating a VHF WinLink station using a DBJ-1.

We also had a few local and new to the area hams stop by and get information on the club. The staff put us in a terrific location for visibility, as well as access to power and the outside for our "antenna farm." Thanks to the members that helped answer questions from attendees and those that stopped by to say hello!

It appears we are getting into the heart of the hurricane season; I just want to emphasize the need to have your radio equipment and emergency power prepped and ready to go. You never know when you may be able to help.

Hamfest is much closer than you might think. This the biggest event the club is involved in and is the primary source of funds for us to operate. We are the largest hamfest in our part of the state and we draw major vendors that also attend Tampa and Orlando. We need help setting up on Friday, performing different tasks during the day Saturday and tear down Saturday afternoon. Go to the club website and sign up to volunteer.

Operating Days have been a success and very helpful to new and 'old' hams alike. Learning about new techniques and new modes has been fun. Not to mention the fellowship of sharing a hobby with like minded folks. The July get together was a large success, learning about what many would consider 'must have' skills. Thanks to everyone who contributed and attended. But, we need more ideas of things you want to learn about. Trust me, we have members who can help you. We just need to know what you want to learn about. Just let us know.

Next Club Meeting

Tuesday, August 17

***** Green Clover Hall *****

319 SE 26th Terrace, Ocala

6:00 PM Mentoring & Socializing

7:00 PM Meeting

Program: Understanding Solar Indices
Carl Berry, KC5CMX

SSRC Board of Directors first Tuesday, 7:00 PM,
Green Clover Hall

Upcoming Events

Sept 14 — VE Testing, Green Clover Hall,
7:00 PM

Hamfest — December 4, 2021
[Sign up here](#)

**Silver Springs
Radio Club Net**
K4GSO Repeater

Mondays at 7:30 PM

146.610, PL 123-

We are not too far out from elections for next year. If you have a desire to serve, be prepared to throw your hat into the ring. We'll put out more information as we get closer to that time.

We look forward to seeing you at our meeting Tuesday night!

NVIS Antenna Upgrade

Darrell Franchuk KG4CCB

In June 2021, a minor modification was made to the NVIS antenna originally constructed as part of a 2020 Silver Springs Saturday Ham School activity. The antenna upgrade is based on the article "Improving the AS-2259 NVIS Antenna" by N3AE and N3IDX. The AS-2259 antenna is the military design modified by DX Engineering. The current modification consisted first of adding coils to the antenna wire legs. The 80-m coil consists of 19-1/2 turns of wire on a piece of 1-1/2-inch PVC pipe and the 40-m coil consists of 14 turns of a piece of 3/4 inch PVC pipe. The coils are located 7 inches from the center feed point.



To test the modification impact, the antenna was set up (initially) in the side yard at home where I previously had 80m tuning challenges due to sandy soil. The antenna was resonant at 6.9-MHz and 3.5-MHz. It was readily tuned to 7.2-MHz with an MFJ tuner but tuning to 3.95-MHz was challenging and required a step-by-step iterative process. While the antenna should be readily trimmable to make it resonant within the desired portion of the 80-M and 40-M bands, this should be performed at a location away from home due to the sandy soil. As the antenna is rather cumbersome in its current configuration with PVC fittings and the PVC pipe mast, taking it to Flemington Community Park, for example, was not desirable. This was improved by replacing the feed-point PVC fittings with the DXE Engineering NVIS hardware so that the Spiderbeam mast can be used. The antenna wire connections to the coils use wing nuts so the antenna wires can be readily removed for storage and to make set-up less cumbersome.



The antenna was taken to nearby Flemington Community Park for testing. The initial check was on 80m, and the antenna was resonant at 3.7689 MHz with SWR of 1.4 and R-value of 51. The initial check on 40m yielded a resonant point of 6.9 MHz with SWR around 1.4 but a high R-value. The wire length was trimmed a few times on each leg with minimal improvement. 2 The coils were then reduced 1 turn and then 1 turn again. In all this, the best that could be attained was resonance around 7.25 MHz with SWR ranging from 1.4 to 1.8 and R values of 70 or higher.

With a desire to improve resonance, the N2AE / N3IDX article was reviewed for coil design particulars. The article identified coil design calculators by K7MEM. A search turned up a calculator at www.66pacific.com. Through a trial-and-error process the calculator



Continued on next page....


indicated that a 50-ft dipole with a resonant point of 7.235-MHz would need 3.8 microhenries of inductance when using 14-ga wire. This can be achieved with a coil consisting of 14-turns of 14-ga wire on a piece of 1-inch PVC pipe (versus the ¾-in pipe specified in the article).

- The original coil used 14 turns of 18-ga wire and produced an inductance of 3.4 microhenries.
- The original coil with 12 turns of 18-ga wire, as adjusted in the field, produced a reasonable SWR with an R-value around 70 and has a calculated inductance of 2.8 microhenries.

Therefore, two new 40-meter coils were wound on 1-inch PVC pipe consisting of 14 turns of 14-ga wire and calculated to produce 3.8 microhenries. When field tested, the antenna was initially resonant at 6.7 MHz with an R-value of around 70. A few iterations of trimming resulted in a resonant point of 7.2 MHz with R-value of 51 and SWR of 1.9. This was attained with the assist of a 25-ft counterpoise and antenna wires trimmed to 23-ft. With the assist of an MFJ antenna tuner an SWR of 1.0 was attained with R-value of 70 or an SWR of 1.4 and R-value of 50. The antenna could also be tuned to 14.296 MHz with 1.3 SWR and an R-value of 48.

It is disappointing the antenna could not achieve better resonance, but it is considered acceptable. Some writers indicate an SWR less than 2.0 is adequate and efforts to improve beyond that may not be worth the effort. I was able to contact POTA Activators in GA, LA, and VA on 5 watts with the FT-818 and the antenna tuner. I am not yet confident I am achieving NVIS results specifically. Perhaps I just need another Inverted-V dipole.





SSRC FOUNDED
1947

Membership And Information + Area Radio Clubs Calendar Of Events CLUB SIGN IN

Contact The President Contest Score And Status Directions To: Donate To The Club

QRP/Contesting + Helpful Links CLASSES AND TESTING + Event Signup +

Pictures To Marty For The Oracle INACTIVE +

SEARCH

@ **EMAIL THE PRESIDENT**
PRESIDENT@K4GSO.US

PO BOX 787, SILVER SPRINGS, FL 34489
319 SE 26TH TERRACE,
OCALA, FL 34471

Sending pictures to The Oracle just got easier!

Marty Brown, N4GL, Editor

You can now send me pictures from the Website, k4gso.us. Just click on the menu item above and attach your files. You will be able to include a description, as well. Please use names and call signs when possible. Thanks, Carl Berry, KC5CMX, webmaster

Operating Day at Green Clover Hall

July 31, 2021

The topics included Anderson Power Poles and



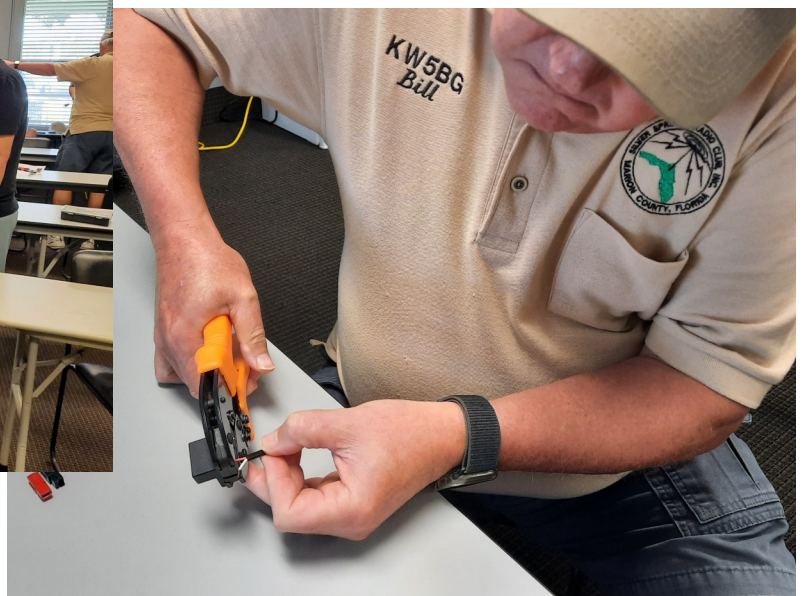
Andy Allen, NA2DA, makes a new connection.

Thanks to KC5CMX for the pictures.



Andy, NA4DA, shows off the finished prod-

Thanks to Jim Burgess, KN4MIV, for the pictures



Bill Gillespie, KW5BG, demonstrates crimping an Anderson Power Pole.

July Operating Day, continued....

Elbert Wilkinson, KQ3K, strips and solders.



Thanks to Jim Burgess, KN4MIV, for the pictures



SSRC Participates in Outdoor Expo

The club had a great turnout of member for last weekend's Outdoor Expo. The location was one of two enormous Expo buildings at the World Equestrian Center (WEC). It was a good opportunity to show off club activities.



Monitor on the left running a ham radio presentation.

Monitor on the right running PSK Reporter using data from WA4IPU running FT8.

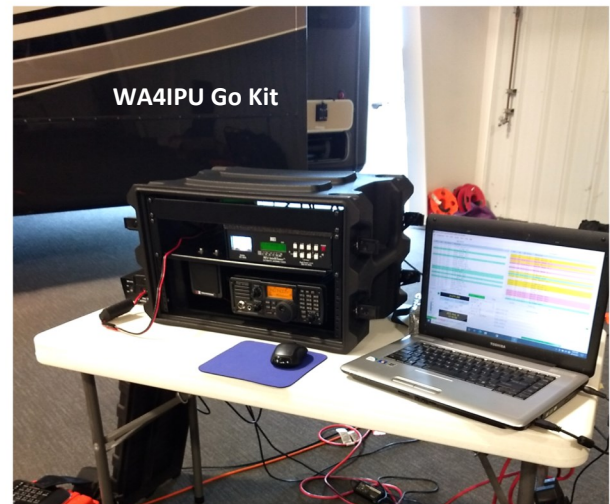


N4FP operating remotely to his radio in SE Ocala.



Outdoor Expo 2021

Background: WA4IPU exercising his Go Kit on FT8
 Foreground: KW5BG running Winlink.



W4DAX and KW5BG





N2HAY and KC5CMX

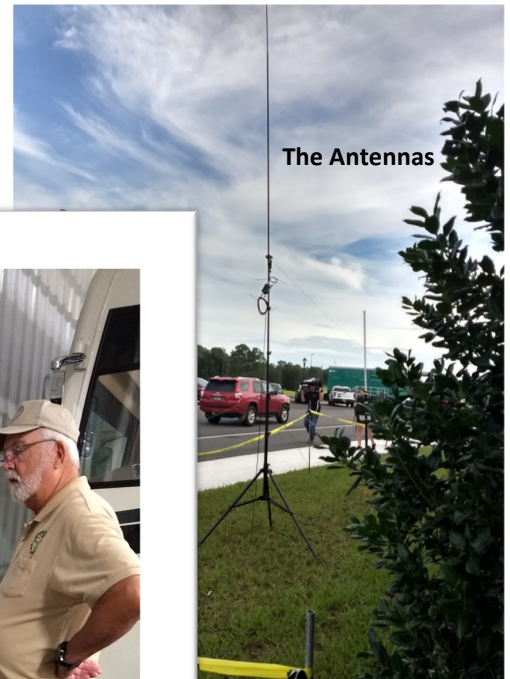


KO4IPV and XYL with N4FP



KQ3K

Outdoor Expo 2021



The Antennas



KQ3K & W4DAX

Spurious Emissions

Upcoming SSRC Programs

September 21 - Andy Allen, Hayden Kaufman - DMR

October 19 - John Wiley - QSL cards, Operating in an HOA

Link to ARRL RF Calculator, Tom Lufkin, W4DAX

<http://arrl.org/rf-exposure-calculator>

W4DXCC DX and Contest Convention, September 24-25, Carl Berry, KC5CMX

[Info](#)

2021 SSRC Officers

President— [Bill Gillespie, KW5BG](#)

Vice President— [Jim Burgess, KN4MIV](#)

Secretary — [Ivory Williams, W6IVY](#)

Treasurer— [Tom Lufkin, W4DAX](#)

Immediate Past President—[Elbert Wilkinson, KQ3K](#)

Directors:

[Mike Condon— W9MMC](#)

[Gilbert Gyarmati— K4GLG](#)

[Wayne Brown— N4FP](#)

SSRC Information

Committee Chairs

[Membership – Elbert Wilkinson, KQ3K](#)

[Trustee K4GSO – Wayne Brown, N4FP](#)

[Newsletter – Marty Brown, N4GL](#)

[Club Minutes and
Financial Reports](#)

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[Green Clover Key Card](#)

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[QST NFL – NFL Section Newsletter](#)

[Silver Springs Radio Club Website](#)

[NFL Section Website](#)

[WA7BNM Contest Calendar](#)

[NG3K DX](#)